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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,108	10/22/2003	Klaus Breitschwerdt	10191/3399	4772

26646 7590 01/05/2006

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EXAMINER	
VINH, LAN	
ART UNIT	**PAPER NUMBER**
1765	

DATE MAILED: 01/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/691,108	BREITSCHWERDT ET AL.	
	Examiner	Art Unit	
	Lan Vinh	1765	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 November 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5* is/are pending in the application.

4a) Of the above claim(s) *1-3* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *4 and 5* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *040405*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group II, claims 4-5 in the reply filed on 11/28/2005 is acknowledged.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claim 4 is rejected under 35 U.S.C. 102(e) as being anticipated by Akahori et al (US 6,320,154)

Akahori discloses a plasma etching method. The method comprises the steps of:

generating, with a plasma source that is configured to generate a high-frequency electromagnetic alternating field, a plasma having reactive species inside a chamber 1 in a reaction region by the action of the alternating field upon oxygen gas/an etching gas inserted into the reaction region and film-forming gas SF6/a passivating gas inserted into the reaction region (col 4, lines 35-60)

in the reaction region, introducing/ inserting the etching gas predominantly into a first zone and inserting the passivating gas predominantly into a second zone (col 5, lines 25-35; fig. 1)

generating reactive oxygen/etching gas species in the first zone by using a plasma that is generated there, and generating reactive SF6/passivating gas species in the second zone by using plasma that is generated there (col 5, lines 38-60; col 6, lines 10-20; fig. 3)

mixing the etching gas species and the passivating gas species with each other in a mixing region above the substrate (col 5, lines 27-32; fig. 1), which reads on mixing the etching gas species and the passivating gas species with each other in a mixing region downstream from the reaction region before their action upon the substrate, wherein a quantity of the SF6 gas/passivating gas is less than the quantity of oxygen gas/etching gas (col 5, lines 29-33), which reads on a quantity of the passivating gas that is used is minimized compared to a quantity of the etching gas

4. Claim 5 is rejected under 35 U.S.C. 102(e) as being anticipated by Akahori et al (US 6,320,154)

Akahori discloses a plasma etching method. The method comprises the steps of:

generating, with a plasma source that is configured to generate a high-frequency electromagnetic alternating field, a plasma having reactive species inside a chamber 1 in a reaction region by the action of the alternating field upon oxygen gas/an etching gas

inserted into the reaction region and film-forming gas SF6/a passivating gas inserted into the reaction region (col 4, lines 35-60)

in the reaction region, introducing/ inserting the etching gas predominantly into a first zone and inserting the passivating gas predominantly into a second zone (col 5, lines 25-35; fig. 1)

generating reactive oxygen/etching gas species in the first zone by using a plasma that is generated there, and generating reactive SF6/passivating gas species in the second zone by using plasma that is generated there (col 5, lines 38-60; col 6, lines 10-20; fig. 3)

mixing the etching gas species and the passivating gas species with each other in a mixing region above the substrate (col 5, lines 27-32; fig. 1), which reads on mixing the etching gas species and the passivating gas species with each other in a mixing region downstream from the reaction region before their action upon the substrate

applying high-frequency power to the chamber form power source for plasma generation after introducing SF6/passivating gas into the reaction region of the chamber (col 5, lines 25-45, fig. 2), which reads on at least an approximately constant proportion energy introduced by the plasma source into the plasma is input into the passivating gas at least approximately independently of the passivating gas flow in the reaction region

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lan Vinh whose telephone number is 571 272 1471. The examiner can normally be reached on M-F 8:30-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on 571 272 1465. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LV
January 2, 2006